

MUSEUM PREVENTIVE CONSERVATION II
Course Data and Syllabus, Spring 2014

General Course Information

AH 6287.80	Preventive Conservation Techniques	CRN 92204
ANTH 6204.80	Museum Preventive Conservation II	CRN 91299
MSTD 6204.80	Preventive Conservation Techniques	CRN 92093

Credit hours: 3.0

Dates and Times

Thursdays 6:10pm–8:00pm
Classes begin 16 January 2014; Spring Break 13 March 2014
Last class 24 April 2014

Venue

National Museum of Natural History, Smithsonian Institution, 10th and Constitution, Washington, DC. Students should assemble by 6:00pm in the Constitution Avenue lobby of the National Museum of Natural History. An escort will take you to the classroom as a single group. Please bring a photo ID in case the security guards request one. If you are unable to be present by 6:00 PM, please make arrangements with the instructors for someone to meet you in the lobby.

Course Directors and Primary Instructors

Catharine Hawks

Conservator, NMNH, Smithsonian
Office address: National Museum of Natural History, NHB Rm 394
Mailing address: 2419 Barbour Road, Falls Church, VA 22043
Tel 703.200.4370 (Personal cell); 202.633.0835 (Office); 202.701.8458 (NMNH cell)
Fax 703.876.9272
E-mail: hawksc@si.edu (preferred) or cahawks@aol.com or chawks@gwu.edu

Shelley Sturman

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Mailing addresses: 2000B South Club Drive, Landover, MD 20785
Tel 202.842.6611 (Office); 202.842.6432 (Main)
Fax 202.842.6886
E-mail: s-sturman@nga.gov (preferred) or s-sturman@gwu.edu

*******PRE-REQUISITE COURSE:** Museum Preventive Conservation I

Required Texts

Available through GW Bookstore or through alternate sites given below

- *Hatchfield, P. 2002. *Pollutants in the Museum Environment: Practical Strategies for Problem Solving in Design, Exhibition and Storage*. Archetype Publications, London.
<http://www.amazon.com/Pollutants-Museum-Environment-Pamela-Hatchfield/dp/1873132964>
- *Landry, G. (ed.). 2000. *The Winterthur Guide to Caring for Your Collections*. Henry Francis DuPont Winterthur Museum, Inc., Winterthur, DE.
<http://www.winterthurstore.com/product/410696/The-Winterthur-Guide-to-Caring-for-Your-Collection.html?cid=111>

Purchase directly (not available through GW Bookstore)

- *ASHRAE Chapter A-23 2011. *Applications Handbook, Chapter 23 Version 2011 Museums, Galleries, Archives, and Libraries*. Purchase PDF (in Inch-Pounds).
http://www.techstreet.com/cgi-bin/detail?product_id=1801490
- *Hawks, C., M. McCann, K. Makos, L. Goldberg, D. Hinkamp, D. Ertel, and P. Silence (eds). 2011. *Health & Safety for Museum Professionals*. AIC Health & Safety Committee and Society for the Preservation of

Natural History Collections, New York, NY.

http://www.universityproducts.com/cart.php?m=product_list&c=2097

Heritage Preservation, 2006. *Field Guide to Emergency Response. DVD and notebook and Emergency Response and Salvage Wheel*. Combination package. Heritage Preservation, Washington, DC.

<https://www.heritagepreservation.org/catalog/product.asp?IntProdID=34>

Available at no charge as downloads

*Ashley-Smith, J., A. Burmester, and M.Eibl (eds.). 2013. *Climate for Collections: Standards and Uncertainties*. Postprints of the Munich Climate Conference, 7 to 9 November 2012. Doerner Institut, Munich.

http://www.doernerinstitut.de/downloads/Climate_for_Collections.pdf

Faulk, W. and L. Sowd. 2001. *Collection Theft Response Procedures*. J. Paul Getty Trust and The Huntington Library.

http://www.getty.edu/conservation/publications_resources/pdf_publications/collections_theft_response.html

*Grzywacz, C. 2006. *Monitoring for Gaseous Pollutants in Museum Environments*. Getty Conservation Institute, Los Angeles.

http://www.getty.edu/conservation/publications_resources/pdf_publications/monitoring_gaseous.html

*Strang, T. J. 2013 *Studies in Pest Control for Cultural Property*. University of Gothenburg, Gothenburg.

<https://gupea.ub.gu.se/handle/2077/31500> (download 3 pdfs for complete text).

***Denotes text required for pre-requisite course, Museum Preventive Conservation I.**

Additional readings (required and supplemental) are available on course readings CD.

*******The CD will be distributed at the first course session. YOUR CD MUST BE RETURNED AT THE END OF THE COURSE TO RECEIVE A FINAL GRADE .**

Course Description

Practical applications of preventive conservation for: preservation planning; procedures to facilitate collections care; preparation of grant proposals for collections care initiatives; environmental monitoring; design and maintenance of facilities, exhibits, and collection storage; collections maintenance; emergency management; integrated pest management; security; safety; and use of facilities and collections.

Learning Outcomes

Upon completion of the course, participants will be able to:

- Integrate preventive conservation into museum policies and practices for:
 - Risk assessment
 - Institutional libraries and archives (often not viewed as part of museum collections, but frequently incorporating collection documentation essential to conservation concerns)
 - Facilities, exhibition, and storage design
 - Emergency preparedness, salvage, and response
 - Fire protection (including and understanding of protection systems and equipment maintenance)
 - Physical security of collections
 - Safety of visitors, staff, interns and volunteers
 - Integrated pest management
 - Routine maintenance of grounds and facilities
 - Maintenance of cultural property
 - Use of collections
 - Special events and facilities rentals
 - Packing and moving collections
- Calibrate environmental monitoring equipment

- Navigate preventive conservation and related Web sites
- Describe cleaning methods used to maintain cultural property and know which methods can be used by museum staff with various levels of training
- Identify funding sources available for collection care projects
- Create a grant proposal for a collections care project
- Apply peer review processes for collections care proposals
- Advance collection care concerns with architects and engineers for construction/renovation of facilities
- Identify classes of adhesives used in care of cultural property and evaluate use of adhesives with heritage collections

Code of Academic Integrity

All students are expected to comply with the George Washington University Code of Academic Integrity in completing assignments and examinations. The Code is available at

<http://www.gwu.edu/~ntegrity/code.html>

Accommodation for Religiously Observant Students

In keeping with University policy, student are to notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. These students will be permitted to be absent without penalty on such occasions, including permission to make-up examinations. The full policy is available at: <http://registrar.gwu.edu/university-policies>

Support for Students Outside the Classroom

Disability Support Services (DSS)

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to:

<http://gwired.gwu.edu/dss/>

University Counseling Center (UCC) 202-994-5300

The UCC offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:

- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals

<http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices>

Security

In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location. Instructions on evacuation procedures and fire safety will be given at each class venue.

Grading

Numerical scores for assignments are posted on the Blackboard site for the course; final grades are based on the BB calculations and given as letter grades.

A	95-100	B-	80-82
A-	90-94	C+	77-79
B+	87-89	C	73-76
B	83-86	C-F	70-72

Method of Evaluation

Class participation (class discussions; effort)	10%
Quizzes (2 @ 10%)	20%
Website critique	10%

Grant proposal (team grade)	35%
Peer reviews, written	15%
Peer reviews, oral	10%

Assignments

- **Working in assigned teams**, students will prepare the **face sheets, narrative, and budgets (including a budget justification), brief staffing bios, data on supplies and equipment, and any other elements presented in class** for a grant proposal for an IMLS Museums for America Conservation Project Support grant to re-house a collection in a small or mid-sized museum. Specific portions of each proposal that must be submitted will be discussed in class.
- **Working as individuals, each student will**
 - Prepare a **one page** (single spaced) critique of a conservation Website to be assigned at first class and be prepared to discuss the review in class.
 - Prepare **written reviews for 2 grants** prepared by other teams, using a peer review form provided by the instructors.
 - **Take part in a peer review panel** to determine whether proposals merit funding. Students should be prepared to describe the projects they reviewed and orally defend their written reviews at the panel session as well as take part in the discussions about other grants.

CONSULT THE COURSE SCHEDULE FOR INFORMATION ON DUE DATES FOR ASSIGNMENTS AND QUIZZES. ADDITIONAL INFORMATION ABOUT ASSIGNMENTS AND GRADING RUBRICS IS AVAILABLE ON THE COURSE BLACKBOARD SITE

Class Sessions and Reading Assignments

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Session 1.1 Course overview and Introduction – Sturman
Team assignments for grant proposal project and Website assignments

Session 1.2 Conservation planning and quantitative risk assessment – Hawks

Scanned Required Readings

Risk assessment & planning

Brokerhof, A. 2007. Applying the outcome of climate research in collection risk management—or a challenge to our research efforts. Pp.115-121 in *Museum Microclimates: Contributions to the Conference in Copenhagen, November 2007* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.

Brokerhof, A., T. Luger, B. Ankersmit, F. Bergevoet, R. Schillemans, P. Schoutens, T. Miller, J. Kiers, G. Meuthing, and R. Waller. 2005. Risk assessment of Museum Amstelkring: application to an historic building and its collections and the consequences for preservation management. Pp. 590-596 in *Preprints of the ICOM-CC 14th Triennial Meeting, The Hague 12-16 September 2005*. International Council of Museums and James & James Publishers, London.

Lambert, S. 2010. *Italy and the History of Preventive Conservation*. CeROART, from <http://ceroart.revues.org/1707>

Waller, R. 2008. Cultural property risk assessment: matching approach with purpose. Pp. 815-819 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.

Waller, R. 2008. Comprehensive risk assessment. Pp. 179-190 in *Real-Time and Deliberative Decision Making* (I. Linkov et al., eds.) NATO Science for Peace and Security Series-C. Springer Science + Business Media.

Waller, R. and S. Michalski. 2004. Effective preservation. *GGI Newsletter* 19(1): 6 pp.

Review this Web Site (to understand the range of content)

Risk assessment & planning

Collections Link (Benchmarking)

<http://www.collectionslink.org.uk/programmes/benchmarks-for-collections-care>

Scanned Supplemental Reading

Risk assessment & planning

Ashley-Smith, J. 1999. Value, pp. 81-98 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.

Waller, R. 2003. Pp. 55-104 in *Cultural Property Risk Analysis Model*. Göteborg Studies in Conservation 13. Acta Universitatis Gotheburgensis, Göteborg.

Session 2.1 IMLS Museums for America, Collections Stewardship, and other programs – Mark Feitl, Program Officer, IMLS

Session 2.2 Funding sources for collections care - Hawks

Scanned Required Reading

Funding

Heritage Preservation. 2003. *Capitalize on Collections Care to Increase Support*. Heritage Preservation, Washington, DC.

IMLS Program documents – Reviewer Handbook, Budget Form, Program Information Sheet, and SF-424S.

Consult these Websites (required)

Funding

IMLS Museums for America grant guidelines (read all carefully, concentrate on those for Collections Stewardship, Provision of Optimum Environment, and review criteria); download budget and narrative forms, and any other forms necessary for preparation of proposals:

http://www.imls.gov/applicants/2014_museums_for_america_guidelines.aspx

Session 3.1 HVAC systems and how they work – Darnell Bell, Building Automation Systems, Smithsonian Institution

Session 3.2 Video on facilities design; Facilities design & renovation – Hawks

Required Texts

Facilities design & renovation; HVAC systems

ASHRAE – *Chapter A-23 Museums, Galleries, Archives, and Libraries*; Hawks et al. – Chapters 2, 11

Scanned Required Readings

HVAC systems

Ford, P. P. Herzog, J. Linden, J. Reilly, and K. Smith. 2012. Chapter 2: Factors that Shape the Storage Environment, pp. 16-32 in *IPI's Guide to Sustainable Preservation Practice for Managing Storage Environments*. Image Permanence Institute, Rochester, NY.

Lechner, N. 1991. Pp. 1-9 and 11- 22 in *Heating, Cooling, Lighting Design Methods for Architects*. John Wiley & Sons, New York.

Facilities design & renovation

Ashley Smith, J. 2007. Current thinking on environmental standards. Pp. 10-14 in *Conservation Matters in Wales - Challenging Buildings: the Search for Solutions*. Federation of Museums and Galleries in Wales, Cardiff.

- Hefferan, S. 2008. Working with daylight in the museum environment. *WAAC Newsletter* 30(1): 22-24.
- Padfield, T. 2007. How to design a museum building that protects the collection without destroying itself. Pp. 4-7 in *Conservation Matters in Wales - Challenging Buildings: the Search for Solutions*. Federation of Museums and Galleries in Wales, Cardiff.
- Watts, S., J. Berry, A. de Joia, and F. Philpott. 2002. In control or simply monitoring? The protection of museum collections from dust and vibration during building works. Pp.108-115 in *Preprints of the 13th Triennial ICOM-CC Meeting, Rio de Janeiro, 22-27 September 2002* (R. Vontobel, ed.). James and James, London.

Scanned Supplemental Readings

Facilities design & renovation

- Artigas, D. 2007. *A Comparison of the Efficacy and Costs of Different Approaches to Climate Management in Historic Buildings and Museums*. Thesis for Graduate Program in Historic Preservation, University of Pennsylvania. Web published at <http://repository.upenn/hp.theses/63>.
- Getty Conservation Institute. 2009. *Alternative Climate Controls for Historic Buildings*. Contributions to the Experts' Roundtable on Sustainable Climate Management Strategies, Tenerife, April 2007. Getty Conservation Institute, Los Angeles. http://www.getty.edu/conservation/science/climate/climate_experts_roundtable.html#proceedings
- Grattan, D. and S. Michalski. 2009. *Environmental Guidelines for Museums – Temperature and Relative Humidity (RH)*. Canadian Conservation Institute, Ottawa. <http://www.cci-icc.gc.ca/crc/articles/enviro/index-eng.aspx>
- Hatchfield, P. 2011. Crack, warp, shrink, flake: a new look at conservation standards. *Museum* (Jan-Feb):40-43, 51-53.
- Pretzel, B. 2003. Materials and their interaction with museum objects. *V&A Conservation Journal* Summer (44): 1-4 & chart of pollutants vs materials.
- Saunders, D. and J. Kirby. 2008. A comparison of light-induced damage under common museum illuminants. Pp. 766-774 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Thickett, D. 2002. Vibration damage levels for museum objects. Pp. 90-95 in *Preprints of the 13th Triennial ICOM-CC Meeting, Rio de Janeiro, 22-27 September 2002* (R. Vontobel, ed.). James and James, London.

Session 4.1 Practicum on reading blueprints and other construction documents - Jeffrey Hirsch, AIA, LEED AP, Principal, Director of Cultural Practice, EwingCole

Session 4.2 Historic preservation and facilities maintenance plans – Jeffrey Hirsch

Required Texts

Facilities maintenance

Hawks et al. – Chapters 6, 13

Scanned Required Readings

Facilities maintenance

- American Association of Museums. 2007. *AAM Standards Regarding Facilities and Risk Management*. American Association of Museums, Washington, DC.
- Daniel, V., S. King, C. Pearson, I. Cole. 2005. Stories from historic buildings. Pp. 625-631 in *Preprints of the ICOM-CC 14th Triennial Meeting, The Hague, 12-16 September 2005*. International Council of Museums and James & James Publishers, London.
- Frens, D.1998. Establishing a maintenance plan. Pp. 29-39 in *Caring for Your Historic House* (C. Fisher and H. Miller, eds.). Harry N. Abrams, NY.

- Miller, H. 1998. Why care about your historic house? Pp. 10-19 in *Caring for Your Historic House* (C. Fisher and H. Miller, eds.). Harry N. Abrams, NY.
- MLA and ARUP. 2010. *Museums & Art Galleries Survival Strategies: A Guide for Reducing Operating Costs and Improving Sustainability*. ARUP, London.
- Stevens, R. 2010. Preventive conservation and the historic house structure. Pp. 125-148 in *Preventive Conservation for Historic House Museums* (J. Merritt and J. Reilly, eds). Altimira Press, Lanham, MD.
- Weeks, K. 1986. *New Exterior Additions to Historic Buildings: Preservation Concerns*. Preservation Briefs 14. National Park Service, Washington, DC.

Scanned Supplemental Readings

Facilities maintenance

- Doehne, E. and C. Price. 2010. *Stone Conservation: An Overview of Current Research*. 2nd ed. Research in Conservation. Getty Conservation Institute, Los Angeles.
- Edison, M. 2006. The American natural cement revival. *ASTM Standardization News* 34(1): 35-39.
- Feilden, B. 1994. Pp. 217-231 in *Conservation in Historic Buildings*. Butterworth-Heinemann, Oxford.
- Smith, B. 2003. Background controls on urban stone decay. Pp. 31-60 in *The Effects of Air Pollution on the Built Environment* (P. Brimblecombe, ed.). Air Pollution Reviews v. 2. Imperial College Press, London.
- Wheeler, G. Considerations in cleaning historic stonework. *AIC News* 31(2): 1, 9-10.

Consult these Websites (suggested)

Facilities maintenance

- General Services Administration. www.gsa.gov/historicpreservation
- National Park Service *Preservation Briefs* 44. <http://www.nps.gov/tps/index.htm>
- National Park Service. *Secretary of the Interior's Standards for the Treatment of Historic Properties* http://www.cr.nps.gov/hps/tps/standguide/overview/using_standguide.htm

Session 5.1-2 Fire protection – Bryan Stemen, Fire Protection Specialist, CSP, CFPS, F&G Standards and Assurances Lead, BP Exploration (Alaska) Inc.

Required Texts *Fire protection*

Hawks et al. – Chapter 3

Scanned Required Readings

Fire protection

- Baril, P. 1998. *Fire Protection Issues for Historic Buildings*. CCI Notes 2/6. Canadian Conservation Institute, Ottawa.
- Tétreault, J. 2008. Fire risk assessment for collections in museums. *Journal of the Canadian Association for Conservation* 33: 3-21.

Scanned Supplemental Readings

Fire protection

- Fire Protection Association. 1994. Focus on sprinklers. *Fire Prevention* 267(March): 1-4.
- General Services Administration, Advisory Council on Historic Preservation. 1989. *Fire Safety Retrofitting in Historic Buildings*. General Services Administration, Washington, DC.
- Kaplan, M. 1998. Fire protection. Pp. 213-226 in *Caring for Your Historic House* (C. Fisher and H. Miller, eds.). Harry N. Abrams, NY.
- Viking Corporation. *Automatic Sprinkler System Types*.
- Wilson, R. 1985. *Fire Detection Systems*.
- Wilson, R. 2004. *Fire safety strategies*. Text from a museum fire risk assessment.

Consult these Websites (suggested)

Fire protection

- Automatic Fire Alarm Association www.afa.org

Consumer Product Safety Commission (lists product recalls) www.cpsc.gov
Factory Mutual, resource catalog www.fmglobal.com
Fire Protection Association, United Kingdom www.thefpa.co.uk
Fire Safety Institute <http://firesafetyinstitute.org/>
International Water Mist Association <http://iwma.net/>
National Fire Protection Association (NFPA) www.nfpa.org
National Fire Sprinkler Association www.nfsa.org
NIST Building and Fire Research Laboratory www.bfrl.nist.gov
Underwriter's Laboratory Inc. www.ul.com
US Fire Administration www.usfa.fema.gov

Session 6.1 Integrated pest management – Jeremy Jacobs, Collections Manager, Herpetology, NMNH

Session 6.2 IPM practicum – Jacobs

Required text

IPM

Strang, pp. 263-284

Scanned required readings

IPM

- Child, R. 2007. Insect damage as a function of climate. Pp. 57-60 in *Museum Microclimates: Contributions to the Conference in Copenhagen, November 2007* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.
- Jacobs, J. 1995. Pest monitoring case study. Pp. 211-232 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.
- Pinniger, D. 2011. Ten years on – from vodka beetles to risk zones. Pp. 1-9 in *Integrated Pest Management for Collections. Proceedings of 2011: A Pest Odyssey, 10 Years Later* (P. Winsor, D. Pinniger, L. Bacon, B. Child, K. Harris, DL Lauder, J. Phippard and A. Xavier-Rowe, eds.). English Heritage, London.
- Strang, T. *Controlling Insect Pests with Low Temperature*. CCI Notes 3. Canadian Conservation Institute, Ottawa.
- Strang, T. 1998. Another brick in the wall. Pp. 10-29 in *Proceedings of the 3rd Nordic Symposium on Insect Pest Control in Museums, Stockholm, 24-25 September 1998*. PRE-MAL and ICOM, Stockholm.

Consult these Websites (required)

IPM

Strang, T. and R. Kigawa. 2009. Combatting pests of cultural property. Part of the CCI *Ten Agents of Deterioration* series. <http://www.cci-icc.gc.ca/caringfor-prendresoindes/collections-eng.aspx>

Integrated Pest Management (for museums) www.museumpests.net

Scanned Supplemental readings

IPM

- Baskin, B. 2001. Solar bagging: putting sunlight to work to eliminate insect infestations in mere hours. *WAAC Newsletter* 23(2):20-21.
- Greisser, M., E. Gregor, M. Kurznel-Runtscheiner, U. Kannengiesser, E. Schlegel, M. Griesser-Stermscheg, S. Jahn, A. Hanzal, M. Iftsits, and M. Krainz. 2008. Development and in-depth testing of standard packing solutions for collections and museums. Pp. 743-750 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi. (discusses the impact of anoxia on preservation).

Selwitz, C. and S. Maekawa. 1998. Pp. 41-78 in *Inert Gases in the Control of Museum Insect Pests*. Getty Conservation Institute. Los Angeles.

Williams, S. and S. McLaren. 1990. Modification of storage design to mitigate insect problems. *Collection Forum* 6(1):27-32.

Session 7.1 Storage design - Hawks

Session 7.2 Preservation of museum archives – Sturman

Required Texts

Storage design

ASHRAE-Chapter A-23 *Museums, Galleries, Archives, and Libraries*; Hawks et al. – Chapters 12, 15; Landry – Chapter 1

Institutional archives

Landrey – Chapters 2, 7, 9

Scanned Required Readings

Storage design

Conrad, E. 2007. *Climate Control Systems Design and Climate Change*. Contribution to the Experts' Roundtable on Sustainable Climate Management Strategies, April 2007, Tenerife, Spain. Getty Conservation Institute, Los Angeles, CA.

Hawks, C. 2006. *Storage Design for Museum Collections*. 6 pp.

Hawks, C. 2007 *Selecting Storage Furniture and Storage Materials for Museum Collections*. 8 pp.

Henry, M. 2007. *The Heritage Building Envelope as a Passive and Active Climate Moderator: Opportunities and Issues in Reducing Dependency on Air-Conditioning*. Contribution to the Experts' Roundtable on Sustainable Climate Management Strategies, April 2007, Tenerife, Spain. Getty Conservation Institute, Los Angeles, CA.

Thorn, A. 2008. Vibration impact: methods and results of some recent studies. Pp. 783-90 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.

Preservation of institutional archives

Image Permanence Institute. 2011. *Preserving Film-Based Photographic Collections*. Image Permanence Institute, Rochester.

Iraci, J. 2011. *Longevity of Recordable CDs and DVDs*. CCI Notes 19/1. Canadian Conservation Institute, Ottawa.

Library of Congress. 2013. *Care, Handling and Storage of Motion Picture Film*. Library of Congress, Washington, DC.

National Information Standards Organization. 2000. *Guidelines for Information about Preservation Products*. ANSI/NISO Z39.77-200. National Information Standards Organization, Baltimore, MD.

Scanned Supplemental Readings

Storage design

Lambert, S. 2111. RE-ORG: A Methodology for Reorganizing Museum Storage Developed by ICCROM and UNESCO. CeROArt. From <http://ceroart.revues.org/2112>

Wagner S. (comp). 2000. *Published Environmental Standards*.

Preservation of institutional archives

Casey, M. and B. Gordon. 2007. *Sound Directions: Best Practices for Audio Preservation*. Indiana University, Bloomington. Web published.

Library of Congress (LOC). 2002. *Cylinder, Disc and Tape Care in a Nutshell*. Library of Congress, Washington, DC.

McCormick-Goodhart, M. and H. Wilhelm. 2004. The design and operation of a passive humidity-controlled cold storage vault using conventional freezer technology and moisture-sealed

- cabinets. Pp. 176-181 in *Final Program and Proceedings: IS&T Archiving Conference, San Antonio, 20-23 April 2004*. Society for Imaging Science and Technology, Springfield, VA.
- McIlwaine, J. 2005. *First, Do No Harm: A Register of Standards, Codes of Practice, Guidelines, Recommendations, and Similar Works Relating to Preservation and Conservation in Libraries and Archives*. Preservation and Conservation Section, International Federation of Libraries and Archives.
- Norris, D. 1995. Historic and contemporary photographic prints. Pp. 355-363 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.
- Van der Reyden, D. 1995. Paper documents. Pp. 327-354 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.
- Vest, M., U. Kejser, and C. Brunn. 2008. New long-term storage facilities at the Royal Library, Denmark: storage requirements for mixed collections. Pp. 808-814 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Wagner, S. 2008. Cold storage costs: comparison pricing for photographic collections. *AIC News* 33(1): 1, 8-9.

Consult these Websites (required)

Preservation of institutional archives

National Park Service

http://www.nps.gov/museum/coldstorage/html/intro1_1.html

InterPARES (International Research on Permanent Authentic Records in Electronic Systems)

<http://www.interpares.org/index.htm>

Library of Congress, *Preservation Supplies*

<http://www.loc.gov/preservation/resources/specifications/index.html>

Consult these Websites (suggested)

Storage design

Anthropology Conservation Laboratory, NMNH, Smithsonian Institution. Storage for oversize objects. <http://www.nmnh.si.edu/anthro/conservation/bigstuff.htm>

CAMEO materials database. <http://cameo.mfa.org/>

Preserv'Art information on materials used with collections.

<http://preservart.ccq.mcccf.gouv.qc.ca/index.aspx> (or type PreservArt in your browser)

Preservation of institutional archives

Image Permanence - free publications on preservation of photographic materials.

www.imagepermanenceinstitute.org

International Federation of Libraries and Archives. www.ifla.org

National Archives and Records Administration. www.archives.gov/preservation/

Wilhelm Imaging Research (permanence and printers/papers/printing inks).

<http://www.wilhelm-research.com/index.html>

Session 8.1 Housekeeping in museums - Sturman

Session 8.2 Moving collections - Hawks

Scanned Required Readings

Housekeeping

Lloyd, H., P. Brimblecombe, and K. Lithgow. 2007. Economics of dust. *Studies in Conservation* 52: 135-146.

Rossol, M. 2004. *D-Limonene: Citrus & Terpene Solvents*. Datasheet from ACTS FACTS. Arts, Crafts and Theatre Safety, New York. 7 pp.

Consult this Website (required)

Moving collections

Canadian Conservation Institute. 2013. Papers on shipping and packing. Canadian Conservation Institute, Ottawa.

<http://www.cci-icc.gc.ca/caringfor-prendresoindes/collections-eng.aspx>

Scanned Supplemental Readings

Housekeeping

Rossol, M. 1997. Labels: *Reading between the Lies*. Datasheet. Arts, Crafts and Theater Safety, New York. 6 pp.

Nazaroff, W., M. Ligocki, L. Salmon, G. Cass, T. Fall, M. Jones, H. Liu, T. Ma. 1993. *Airborne Particles in Museums*. Research in Conservation. Getty Conservation Institute, Los Angeles.

Trakumas, S, K. Willeke, S. Grinshpun, T. Reponen, G. Mainelis, and W. Friedman. 2001. Particle emission characteristics of filter-equipped vacuum cleaners. *AIHJ* 62: 482-493

Moving collections

Lavédrine, B. 2003. Lending and shipping. Pp. 126-128 in *A Guide to the Preventive Conservation of Photographs*. Getty Conservation Institute, Los Angeles.

Marcon, P. 1991. Shock, vibration, and protective package design. Pp. 107-120 in *Art in Transit*. National Gallery of Art, Washington, DC.

Marcon, P. 1991. Shock, vibration, and the shipping environment. Pp. 121-132 in *Art in Transit*. National Gallery of Art, Washington, DC.

PACIN 2003. *Materials and Descriptions-Soft Packing Workshop*. Compiled by Michelle Barger of SFMOMA and Scott Atthowe of Atthowe Fine Art for the PACIN Web site.

Consult these Websites (suggested)

Moving collections

Canadian Conservation Institute – PadCAD demonstration program. Download free at

<http://www.cci-icc.gc.ca/tools-outils/padcad-eng.aspx>

National Museum of the American Indian collections move project

<http://nmai.si.edu/explore/collections/moving/>

SPRING BREAK



HAVE A GREAT HOLIDAY!

Session 9.1 Filming in museums – Anthony Wallace, NASM

Session 9.2 Facilities use – Hawks
Use of collections – Sturman

Required Texts

Use of facilities & collections

Hawks et al. Chapters 7, 8, 9, 10, 19

Scanned Required Readings

Filming in museums

Stavroudis, C. 2009. Never Yell “Cut” (A Brief Guide to Filming in Museums). *WAAC Newsletter* 31(2): 10-23.

Use of facilities & collections

Ashley-Smith, J. 1999. The things people do, pp. 246-262 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.

Hallam, D. 1991. The conservation of functional objects – an ethical dilemma. *AICCM Bulletin* 16(2):19-26.

Horstman, N. 1993. Two million feet: wear and tear in an historic house. Pp. 2-29 – 2-32 in *The Interiors Handbook for Historic Buildings*. Vol. 3 (M. Auer, C. Fisher, T. Jester, and M. Kaplan, eds.). Historic Preservation Foundation, Washington, DC.

Lambert, S. and J. Henderson. 2011. The carbon footprint of museum loans: a pilot study at Amgueddfa Cymru–National Museum Wales. *Journal of Museum Management and Curatorship* 26(3):1-27.

Scanned Supplemental Readings

Filming in museums

British Museum. 2013. *Terms and Conditions for Filming*.

Victoria and Albert Museum. 2013. *Agreement for Filming at the Victoria & Albert Museum*.

Use of facilities & collections

Barclay, R. 2004. A decision-making protocol for the use of historic musical instruments. *Journal of the Canadian Association for Conservation* 29: 3-7.

Braun, T. 2007. An alternative technique for applying accession numbers to museum artifacts. *Journal of the American Institute for Conservation (JAIC)* 46: 91-104.

English Heritage. 2004. *Practical Conservation Guidelines for Successful Hospitality Events in Historic Houses*. English Heritage, London.

Lithgow, K., H. Lloyd, P. Brimblecomb, Y. Yoon, and D. Thickett. 2005. Managing dust in historic houses - a visitor/conservator interface. Pp. 662-669 in *Preprints of the COM-CC 14th Triennial Meeting, The Hague, 12-16 September 2005*. International Council of Museums and James & James Publishers, London.

Lloyd, H. and T. Mullany. 1994. The impact of overvisiting: methods of assessing the sustainable capacity of historic houses. Pp. 132-138 in *Preventive Conservation Practice, Theory and Research* (A. Roy and P. Smith, eds). International Institute for Conservation, London.

Mann, P. 1994. Working exhibits and the destruction of evidence in the science museum. Pp. 35-46 in *Care of Collections* (S. Knell, ed.). Routledge, London.

Milwaukee Public Museum. n.d. *Destructive Sampling Agreement and Policy*. Milwaukee Public Museum, Milwaukee, WI.

National Museum of Natural History (NMNH), Department of Anthropology. 2005 *Anthropology Sampling Committee Policies, Procedures and Guidelines*. National Museum of Natural History, Smithsonian Institution, Washington, DC.

National Park Service (NPS). 1998. Evaluating and documenting museum collection use pp. 1.1-1.58 in *Museum Handbook* Part III. National Park Service, Washington, DC.

Turpin, D. 1997. Exhibiting textiles in historic house furnished rooms: balancing conservation and interpretation. Pp. 45-52 in *Fabric of an Exhibition: An Interdisciplinary Approach*. Preprints of Textile Symposium 97. Canadian Conservation Institute, Ottawa

Varnell, C. 1997. 'Let me edu-tain you,' historic artifacts and the world of themed entertainment. Pp. 163-165 in *Fabric of an Exhibition: An Interdisciplinary Approach*. Preprints of Textile Symposium 97. Canadian Conservation Institute, Ottawa.

Sample policies/procedures for facilities rentals and other facilities use

Cornell University. 2005. *Guidelines for the Rental of the Herbert F. Johnson Museum of Art*. Cornell University, Ithaca.

Sam Noble Oklahoma Museum of Natural History. n.d. *Room Rental Policies and Procedures*. Sam Noble Oklahoma Museum of Natural History, Norman.

Session 10.1 Health & safety issues in collection care – Dennis Ertel, CIH, CSP, REM, Sandler Occupational Medicine

Session 10.2 Physical security - Hawks

Required Texts

Health & safety

Hawks et al. – Chapters 4, 5, 6

Scanned Required Readings

Health & safety

Ertel, D. 2009. Risk assessment. *AIC News* 34(5):1, 8-10.

Hawks, C. and T. Radtke, 2000. *An Introduction to Respirator Use in Collections Management*. NPS Conserve-O-Gram 2/13. National Park Service, Washington, DC.

Occupational Safety and Health Administration (OSHA). 2002 (revised). Pp. 1-14 in *Job Hazard Analysis*. OSHA Publication 3071. U.S. Occupational Safety and Health Administration, Washington, DC.

Physical security

Faulk, W. and L. Sowd. 2001. *Collections Theft Response Procedures*. J. Paul Getty Trust, and Huntington Library, Art Collection, and Botanical Gardens, Los Angeles.

Consult this Website (required)

Physical security

International Foundation for Cultural Property Protection. <http://www.ifcpp.org/>

Scanned Supplemental Readings

Health & safety

Hawks, C. 2001. Historical survey of the sources of contamination of ethnographic materials in museum collections. *Collection Forum* 16(1&2): 2-11.

Hawks, C. and K. Makos. 2000. Inherent and acquired hazards in museum objects – implications for care and use of collections. *CRM* (5):31-37.

Pool, M., N. Odegaard, and M. Huber. 2005. Identifying the pesticides: pesticide names, classification, and history of use, pp. 5-31 in *Old Poisons, New Problems* (N. Odegaard and A. Sadongei, eds.) Altamira Press, Walnut Creek, CA.

Physical security

Keller, S. and D. Willson. 1995. Security systems. Pp. 51-56 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.

Macek, J. 2010. Stop! Thief! The theft of community treasures. *Collections: A Journal for Archives and Museum Professionals*. 6(1-2):55-62.

Consult these Websites (suggested)

Health & safety

AIC Health & Safety Guides. http://www.conservation-wiki.com/wiki/Health_%26_Safety

NIOSH Respirators <http://www.cdc.gov/niosh/topics/respirators/> and Respirator Selection <http://www.cdc.gov/niosh/docs/2005-100/default.html>

Physical security

Vocabulary of Museum Security Terms. <http://museum.zib.de/voc/>

Museum Security Network. <http://www.museum-security.org/indexdefinitief.html> (find information on reporting thefts)

FBI Art Theft Web site. http://www.fbi.gov/about-us/investigate/vc_majorthefts/arttheft/arttheft

Session 11.1 Cleaning collections – Sturman

Session 11.2 Practicum: Cleaning objects – Hawks & Sturman

Required Text

Cleaning collections

Hawks et al. – Chapters 8, 9, 10, 12

Scanned Required Readings

Cleaning collections

Fell, V. 1996. Washing away the evidence. Pp. 48-51 in *Archaeological Conservation and Its Consequences* (A. Roy and P. Smith, eds.). Preprints of the Contributions to the Copenhagen Congress, 26-30 August 1996. International Institute for Conservation, London.

- Hedley, G. 1994. Cleaning and meaning: *The Ravished Image* reviewed. Pp. 21-29 in *Care of Collections* (S. Knell, ed.). Routledge, London.
- Montcrief, A. and G. Weaver. 1987. Pp.13-40, 75-85 in *Cleaning*. Science for Conservators, Book 2. Conservation Science Teaching Series. The Conservation Unit, Museums & Galleries Commission, London.
- Rajer, A. 2008. Who cares about public art: commissioning and conservation concerns. *Collections: A Journal for Archive and Museum Professionals* 4(3): 201-210.
- Rhyne, C. 2006. Clean art? *Journal of the American Institute for Conservation* (JAIC) 45:165-170.
- Scanned Supplemental Readings
- Cleaning collections*
- Southall, A. 1990. Pp. 29-34 in *Dirt and Pictures Separated* (S. Hackney, J. Townsend, and N. Eastaugh, eds.). United Kingdom Institute for Conservation, London.

Session 12.1 Emergency management - Hawks

Session 12.2 Conservation in exhibitions – Sturman

Required Texts

Emergency management

Hawks et al. – Chapters 1, 14

Heritage Preservation, 2006. *Field Guide to Emergency Response*. DVD and notebook (review to become aware of contents)

Heritage Preservation. 2005. *Emergency Response and Salvage Wheel* (review to become aware of contents)

Exhibits conservation

Hawks et al. – Chapter 18

Scanned Required Readings

Emergency management

Carmicheal, D. 2010. Chapters 1 and 3. Pp 7-12, 17-21 in *Implementing the Incident Command System at the Institutional Level: A Handbook for Libraries, Archives, Museums, and other Cultural Institutions*. Heritage Preservation and RescuingRecords.com.

Ertel, D. 2007. Dress for disasters. *AIC News* 32(5): 1, 8-9.

Ferraro, J. and J. Henderson. 2011. Identifying features of effective emergency response plans. *JAIC* 50:35-48.

Heritage Preservation 2007. *Preparedness-at-a-Glance*. Poster (review content)

Heritage Preservation. 2007. *Tips for Working with Emergency Responders*. Poster (review content)

Heritage Preservation 2007. *Online Courses in Emergency Management for Cultural Heritage Responders*. List of essential and recommended courses.

Rossol, M. 2001. After disaster: a museum employee's guide to re-entry. Pp. 81-84 in *HELP! A Survivor's Guide to Emergency Preparedness* (C. Ball and A. Yardley-Jones, eds.) Museums Alberta, Edmonton.

Exhibits conservation

Ashley-Smith, J. 1999. Travelling shows, pp. 263-284 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.

Lambert, S. and J. Henderson. 2011. The carbon footprint of museum loans: a pilot study at Amgueddfa Cymru–National Museum Wales. *Journal of Museum Management and Curatorship* 26(3):1-27.

Reuss, M., G. Scott, and F. MacKinnon. 2005. Conservation of exhibitions: making a maintenance programme work. Pp. 693-699 in *Preprints of the ICOM-CC 14th Triennial Meeting, The Hague, 12-16 September 2005*. International Council of Museums and James & James Publishers, London.

- Thickett, D., P. Fletcher, A. Calver, and S. Lambarth. 2007. The effect of air tightness on RH buffering and control. Pp. 245-251 in *Museum Microclimates* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.
- Thickett, D., B. Stanley, and K. Booth. 2008. Retrofitting old display cases. Pp. 775-782 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Tsang, M-J, and M. Blyzinsky. 2008. A practical collaborative approach for long-term displays. Pp. 791-797 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.

Consult this Website (required)

AIC Exhibits Conservation Guidelines

http://www.conservation-wiki.com/wiki/Exhibition_Standards_%26_Guidelines

Scanned Supplemental Readings

Emergency management

- Dorge, V., W. Faulk, and J. Martinez. 2002. Emergency planning for cultural institutions: the process and some of its challenges. Pp. 27-33 in *Preprints of the 13th Triennial Meeting, ICOM-Conservation Committee, Rio de Janeiro, 22-27 September 2002*. ICOM and James & James, London.
- Federal Emergency Management Agency (FEMA). 2005. FEMA 386-6 How-to #6. *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning: State and Local Mitigation Planning How-to-Guide*.
- Hawks, C. 2001. Health and safety during emergency response for cultural property. Pp. 87-94 in *Help! A Survivor's Guide to Emergency Preparedness* (C. Ball and A. Yardley-Jones, eds.). Museums Alberta, Alberta.
- Heritage Preservation Emergency National Task Force. 2005. *Before and After Disasters: Federal Funding for Cultural Institutions*. Heritage Preservation and US Federal Emergency Management Agency, Washington, DC.
- Lowry, M, B. Farrar, D. Amendariz, and J. Podany. 2007. Protecting collections in the J. Paul Getty Museum from earthquake damage. *WAAC News* 29(3): 16-23.
- Verberne-Khurshid, F., R. Boitelle, D. Ormond, and R. van Gulik. 2008. Disaster is just a step away: working at being a step ahead. Pp. 898-807 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi

Exhibits conservation

- Barclay, R., A. Bergeron, C. Dignard, and C. Schlichting. 1998. Pp.3-5 in *Mountmaking for Museum Objects*. Canadian Conservation Institute, Ottawa.
- Fisher, A. 1997. Invisible boundaries: searching for common ground between curators, conservators, and interpreters. Pp. 33-37 in *Fabric of an Exhibition: An Interdisciplinary Approach*. Preprints of Textile Symposium 97. Canadian Conservation Institute, Ottawa.
- Leminski, S. 2002. Choosing a garment for display. Pp. 7-8 in *Museum Mannequins* (M. Bunn and J. White, eds.). Alberta Regional Group of Conservators, Edmonton.
- Prytulak, G. 2010. *Outdoor Storage and Display: Basic Principles*. CCI Notes 15/8. Canadian Conservation Institute, Ottawa.
- Prytulak, G. 2010. *Outdoor Storage and Display: Remedial Measures*. CCI Notes 15/9. Canadian Conservation Institute, Ottawa.

Consult these Websites (suggested)

Emergency management

dPlan Emergency management assessments at cultural institutions. <http://www.dplan.org>

FEMA Web site. www.fema.gov

Heritage Preservation Emergency National Task Force

<http://www.heritagepreservation.org/PROGRAMS/TASKFER.HTM>

Session 13.1 Adhesives and consolidants – Hawks

Session 13.2 Environmental monitoring and calibration lab – Virginia Croskey, Lighting Specialist, NMNH; Hawks & Sturman

Required Texts

Environmental monitoring

Hatchfield – Pp. 55-133, Appendix 2; Appendix 3

Scanned Required Readings

Adhesives

Horie, C. 1987. Chapters 4 and 5, pp. 71-82 in *Materials for Conservation: Organic Consolidants, Adhesives, and Coatings*. Butterworths, London.

Newey, C., R. Boff, V. Daniels, M. Pascoe, and N. Tennent. 1987. Sticking things together, pp. 13-21; and Coatings, pp. 111-118 in *Science for Conservators Book 3: Adhesives and Coatings*. The Conservation Unit, Museums & Galleries Commission, London.

Environmental monitoring

Bullock, L. and D. Saunders. 1999. Measurement of cumulative exposure using blue wool standards. Pp. 21-26 in *Preprints of the ICOM-CC 12th Triennial Meeting, Lyon, 29 August-3 September 1999*. James and James, London.

Cucci, C., A-L. Dupont, S. Gerlach, C. Loisel, M. Bacci, B. Lavédrine, and H. Roemich. 2004. LightCheck®, new systems for monitoring lighting conditions in museums. Pp. 10-16 in *AIC Research and Technical Studies Group 13 June 2004 Session Papers (CD-ROM)*. AIC Research and Technical Studies Group, Washington, DC.

Gryzwacz, C. 2006. Appendices 1 & 2 in, *Monitoring for Gaseous Pollutants in Museum Environments*. Tools for Conservation. Getty Conservation Institute, Los Angeles.

Kilby, V. 1993. Using a Psychrometer to Measure Relative Humidity. Conserve O Gram 3/1 National Park Service, Washington, DC.

Merritt, J. and J. Reilly. 2010. Preventive conservation and light. Pp. 61-78 in *Preventive Conservation for Historic House Museums* (J. Merritt & J. Reilly, eds). Altimira Press, Lanham, MD.

Padfield, T. 2007. Why keep climate records – and how to keep them. Pp.157-163 in *Museum Microclimates: Contributions to the Conference in Copenhagen, November 2007* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.

Pretzel, B. 2008. Now you see it, now you don't: lighting decisions for the Ardabil carpet based on the probability of visual perception and rates of fading. Pp. 759-763 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.

Springer, S. 2008. UV and visible light filtering window films. *WAAC Newsletter* 30(2): 16-23.

Weintraub, S. 2000. The color of white: is there a 'preferred' color temperature for the exhibition of works of art? *WAAC Newsletter* 21(3): 3 pp.

Scanned Supplemental Readings

Environmental monitoring

Adcock, E., M-T. Varlamoff, and V. Kremp. 1998. Environment. Section taken from *IFLA Principles for the Care and Handling of Library Materials*. International Federation of Libraries and Archives and the Council on Library and Information Resources.

Hawks, C. 2005. *Desiccating Microclimates*. 2 pp. Adapted from an article by Steven Weintraub, Art Preservation Services, New York, NY.

Lavédrine, B. 2003.149-158 and 164-169 in *A Guide to the Preventive Conservation of Photographs*. Getty Conservation Institute, Los Angeles.

- Pretzel, B. 2008. Now you see it, now you don't: lighting decisions for the Ardabil carpet based on the probability of visual perception and rates of fading. Pp. 759-763 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Saunders, D. and J. Kirby. 2008. A comparison of light-induced damage under common museum illuminants. Pp. 766-774 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Weintraub, S. 2003 *Demystifying Silica Gel*. Art Preservation Services, New York.

Session 14.1-2 Peer review panel discussion of grant proposals
